Abritus 72 Ltd.

Date: 01-June-2013

RENAULT

ABRITES Diagnostics for Renault

User Manual

Version:

2.1

issued by:

Abritus 72 Ltd

List of Revisions			
Date	**Chapter**	**Description**	**Revision**
11.11.2008		Release version of the document	1.0
18.03.2009		Update to V1.1 of the software	1.1
17.06.200		Update to V2.0 of the software	1.2
20.01.2010		Update to V2.3 of the software	1.3
31.05.2010		Update to V2.6 of the software	1.4
28.07.2010		Update to V2.8 of the software	1.5
02.11.2011		Update to V5.0 of the software	2.0
11.10.2012		Update to V5.2 of the software	2.1

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1 INTRODUCTION

“Abrites Diagnostics for Renault” is a Windows PC based diagnostic software for the Renault vehicles. With this tool you're able to learn new key/cards to the car without need of PIN code. The “Abrites Diagnostics for Renault” also provides basic diagnostic capabilities for Renault vehicles.

2 INSTALLATION

Your set consists of one interface (USB to OBDII). Optionally you might have a programmer which is connected either to the USB port of the PC, or to the interface (USB to OBDII).

2.1 Installing USB Interface drivers

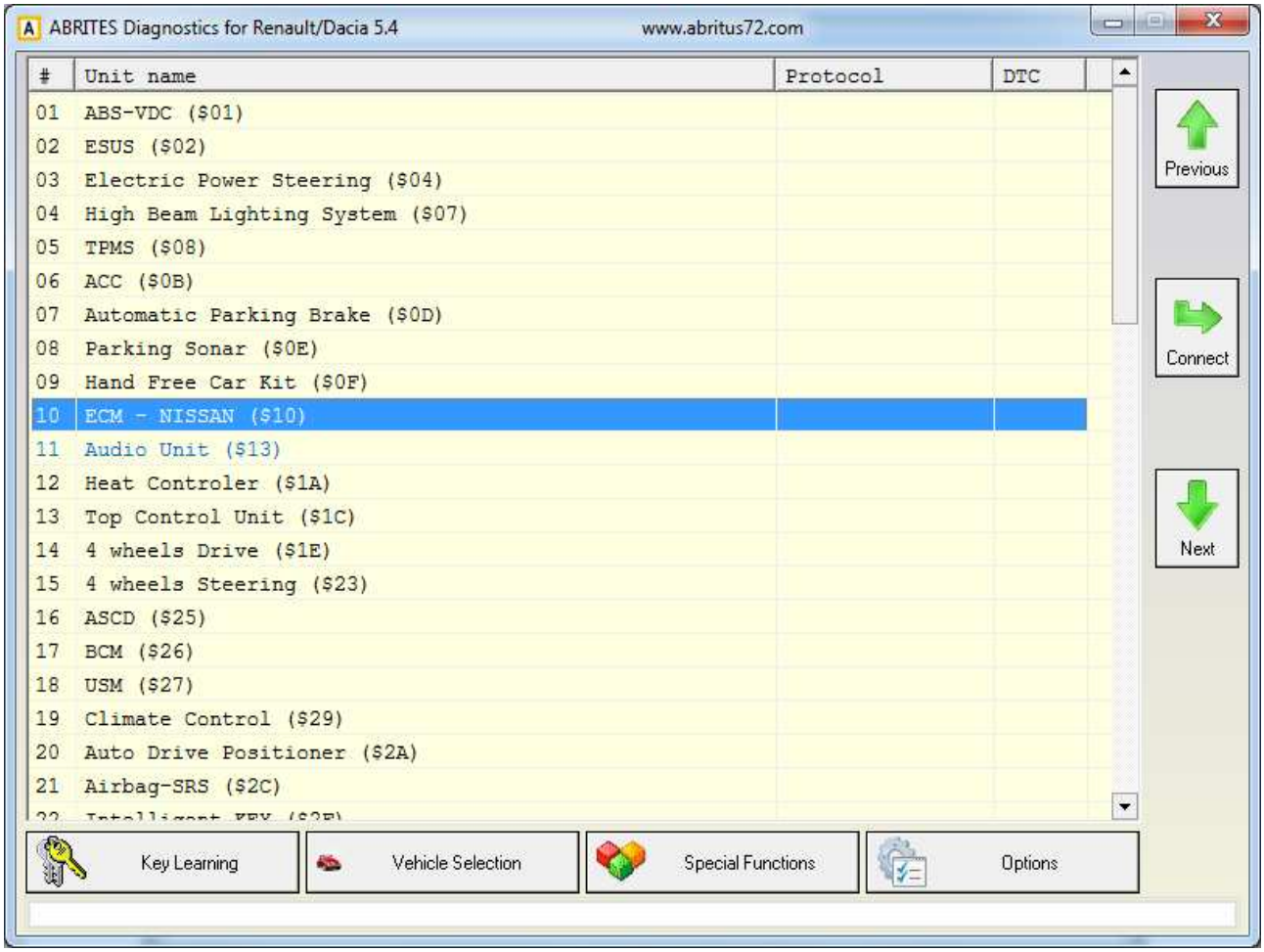
The drivers are installed automatically when installing the software.
In case of some problem with the drivers you might download latest drivers from www.ftdichip.com

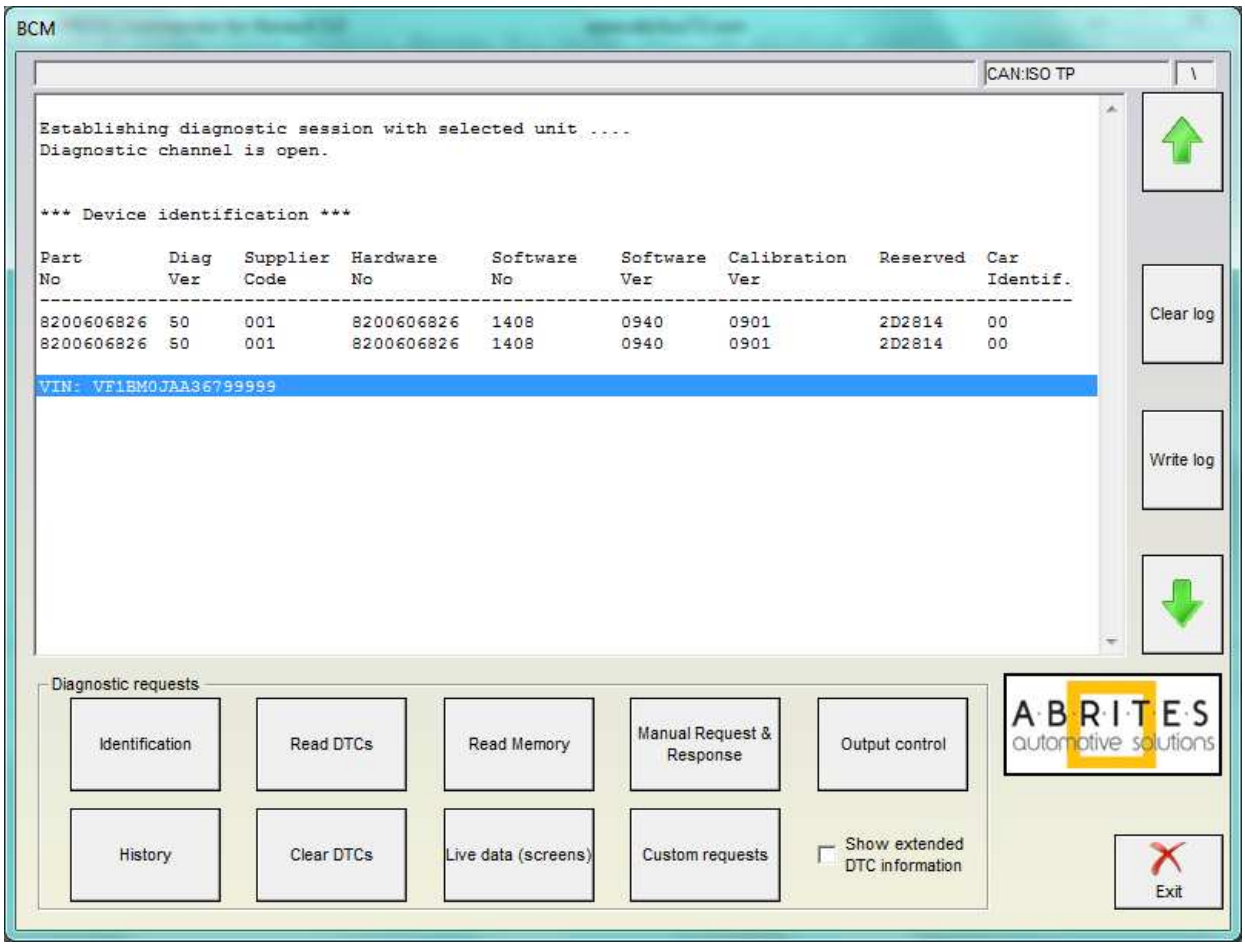
2.2 Installing “ABRITES Diagnostics for Renault”

The “ABRITES Diagnostics for Renault” is contained into the installation package, so please run the setup program. It will create a program group in the start menu and optionally a desktop icon.

Now you are ready to start the "ABRITES Diagnostics for Renault"
When starting the software, there is a splash screen appeared, where the connection with the hardware is examined. **If no problem appear, then a message “Connection OK” should appear!**

The main screen looks like this:


ABRITES Diagnostics for Renault/Dacia 5.4
www.abritus72.com
Unit name Protocol DTC
01 ABS-VDC ($01)
02 ESUS ($02)
03 Electric Power Steering ($04)
04 High Beam Lighting System ($07)
05 TPMS ($08)
06 ACC ($0B)
07 Automatic Parking Brake ($0D)
08 Parking Sonar ($0E)
09 Hand Free Car Kit ($0F)
10 ECM - NISSAN ($10)
11 Audio Unit ($13)
12 Heat Controler ($1A)
13 Top Control Unit ($1C)
14 4 wheels Drive ($1E)
15 4 wheels Steering ($23)
16 ASCD ($25)
17 BCM ($26)
18 USM ($27)
19 Climate Control ($29)
20 Auto Drive Positioner ($2A)
21 Airbag-SRS ($2C)
Previous
Connect
Next
Key Learning
Vehicle Selection
Special Functions
Options


BCM
CAN:ISO TP
Establishing diagnostic session with selected unit ....
Diagnostic channel is open.
*** Device identification ***
Part No | Diag Ver | Supplier Code | Hardware No | Software No | Software Ver | Calibration Ver | Reserved | Car Identif.
8200606826 50 001 8200606826 1408 0940 0901 2D2814 00
8200606826 50 001 8200606826 1408 0940 0901 2D2814 00
VIN: VF1BM0JAA36799999
Clear log
Write log
Diagnostic requests
Identification
Read DTCs
Read Memory
Manual Request & Response
Output control
History
Clear DTCs
Live data (screens)
Custom requests
Show extended DTC information
ABRITES automotive solutions
Exit

ATTENTION:

Make sure you are running the “ABRITES Diagnostics for Renault” from its folder. If you are using a shortcut to the “ABRITES Diagnostics for Renault”, please be sure that the “working folder” parameter is set to the folder where the executable is placed! If the “working folder” of the shortcut is not set the K-Line may function incorrectly.

3 DIAGNOSTIC WITH "ABRITES DIAGNOSTICS FOR RENAULT"

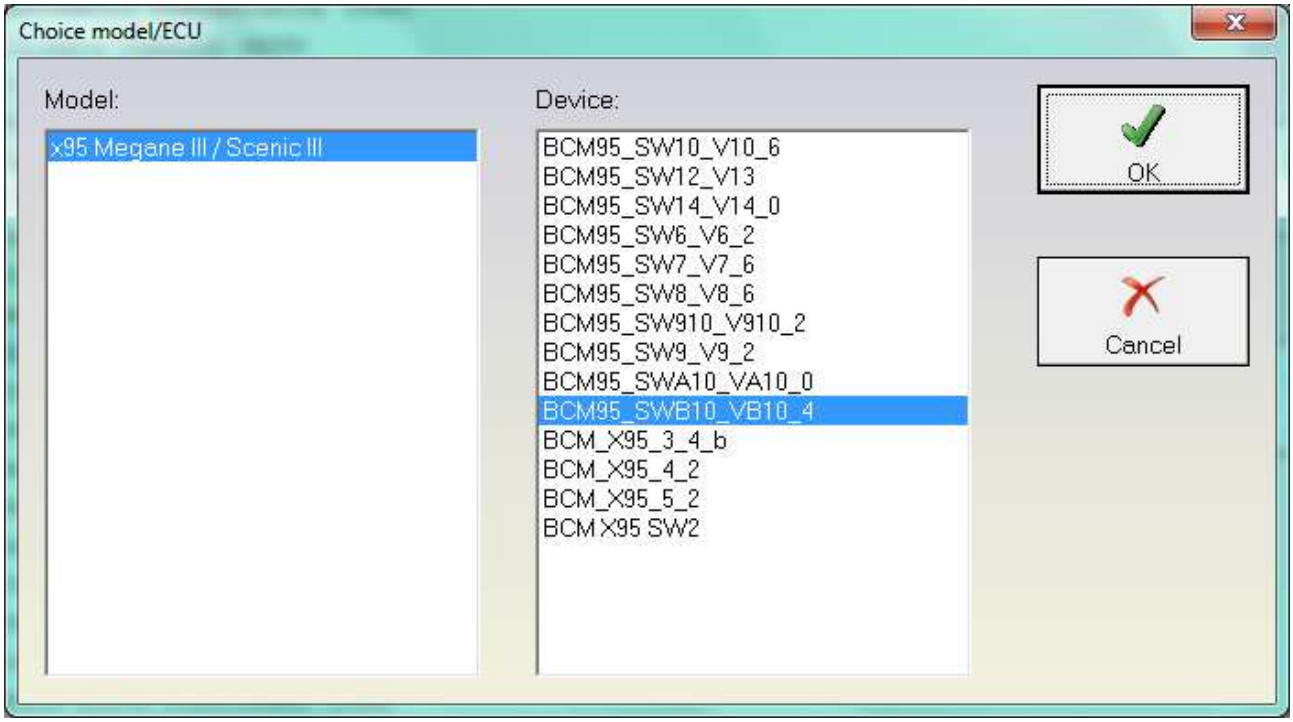
The "ABRITES Diagnostics for Renault" consists basically of two parts:

- Standard diagnostic functions like device identification and reading/clearing trouble codes.
- Key-learning
- Special functions like dump tool, PIN Calculator, etc.

All devices, which can be installed into the car are listed in the main screen of the "ABRITES Diagnostics for Renault". If you want to connect to some device please double click on it. The "ABRITES Diagnostics for Renault" supports communication through CAN and K-Line with fast init.

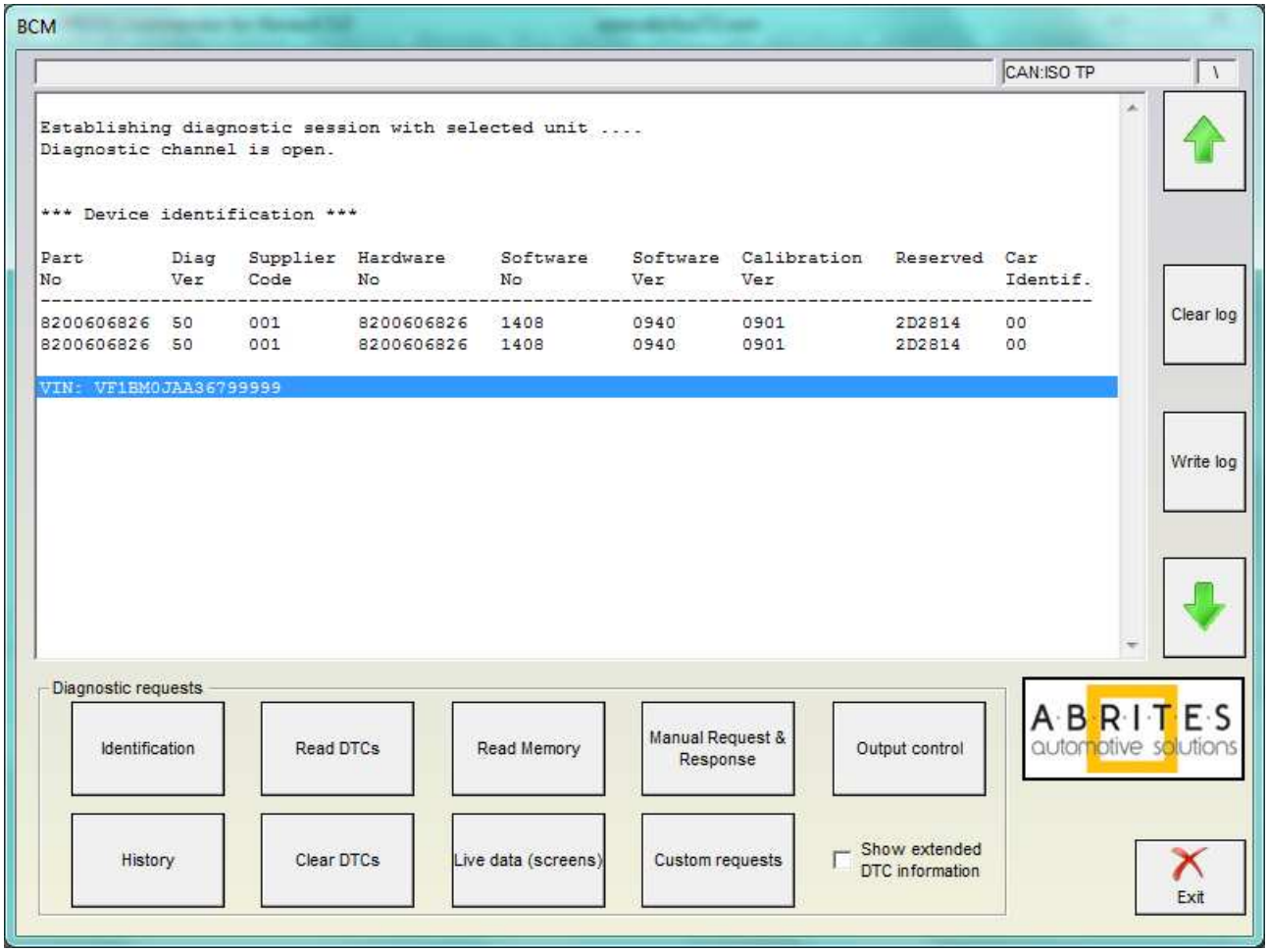
3.1 Standard diagnostic requests

When double-clicking on the desired device in the main "ABRITES Diagnostics for Renault" window, you connect to the device to proceed standard diagnostic requests. Before you connect to the device, there is dialog where to select the platform and database for the module. This database contains description of the DTCs, requests available to the device, description of live data (screens), etc. If incorrect database is selected, it is possible that some DTCs are not displayed with human description, or the description is wrong, respectively also the screens and requests may be not 100% valid.



If during the start-up of the software the model was automatically detected, from this dialog you don't have to select the model. If model was not autodetected, you've to select the model from a list of all renault models.
For some model there are more than one database for the concrete device (e.g. Megane III UCH device). The customer has to select which of all possible databases to use. Normally all of them

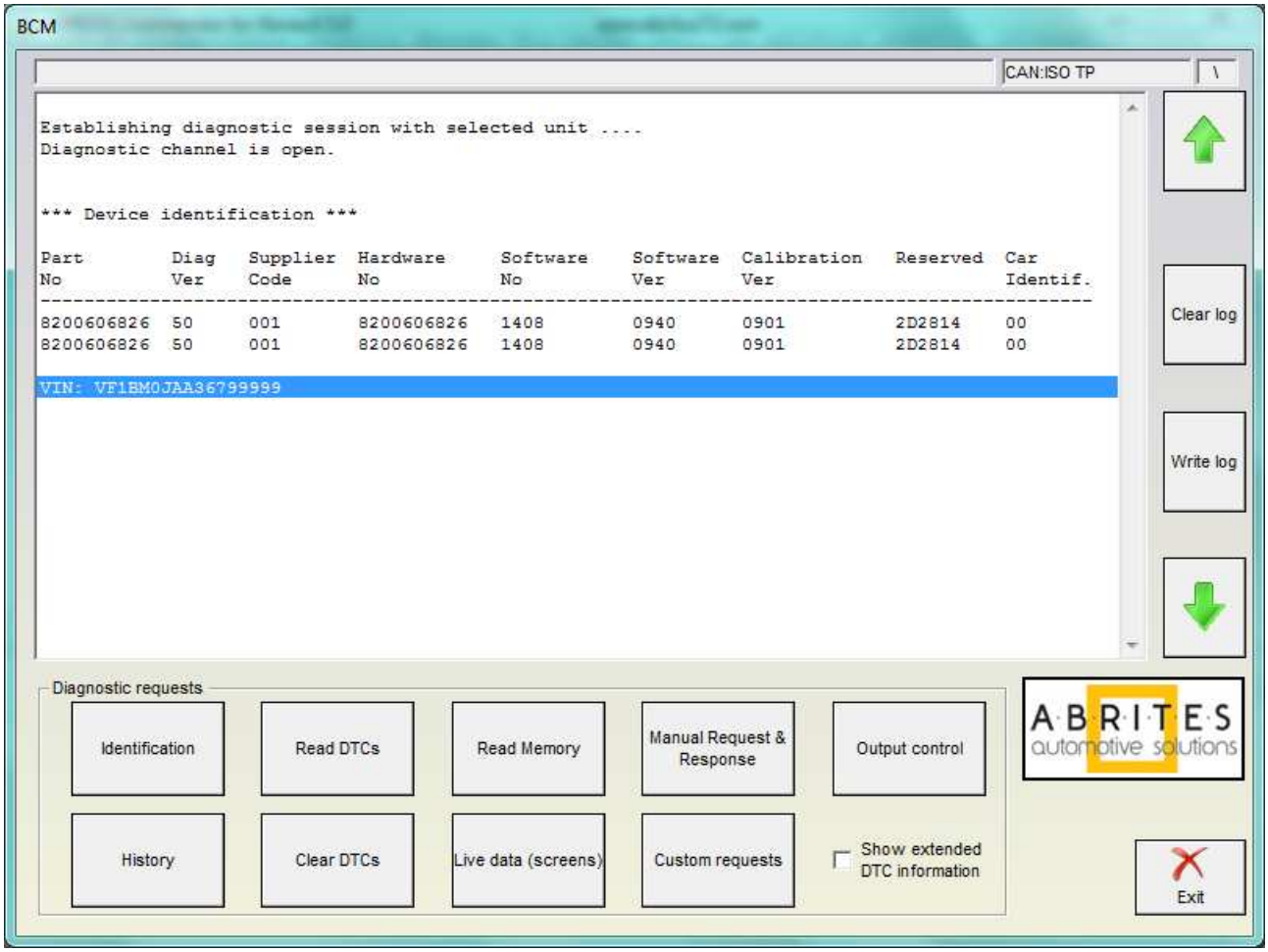
are near the same and these databases are reflecting to the historical development of the device. Normally you've to use the database with the most major number.
After specifying the database, the connection to the device is established and the following dialog is opened:



This dialog provides you the possibility to execute the following diagnostic requests:

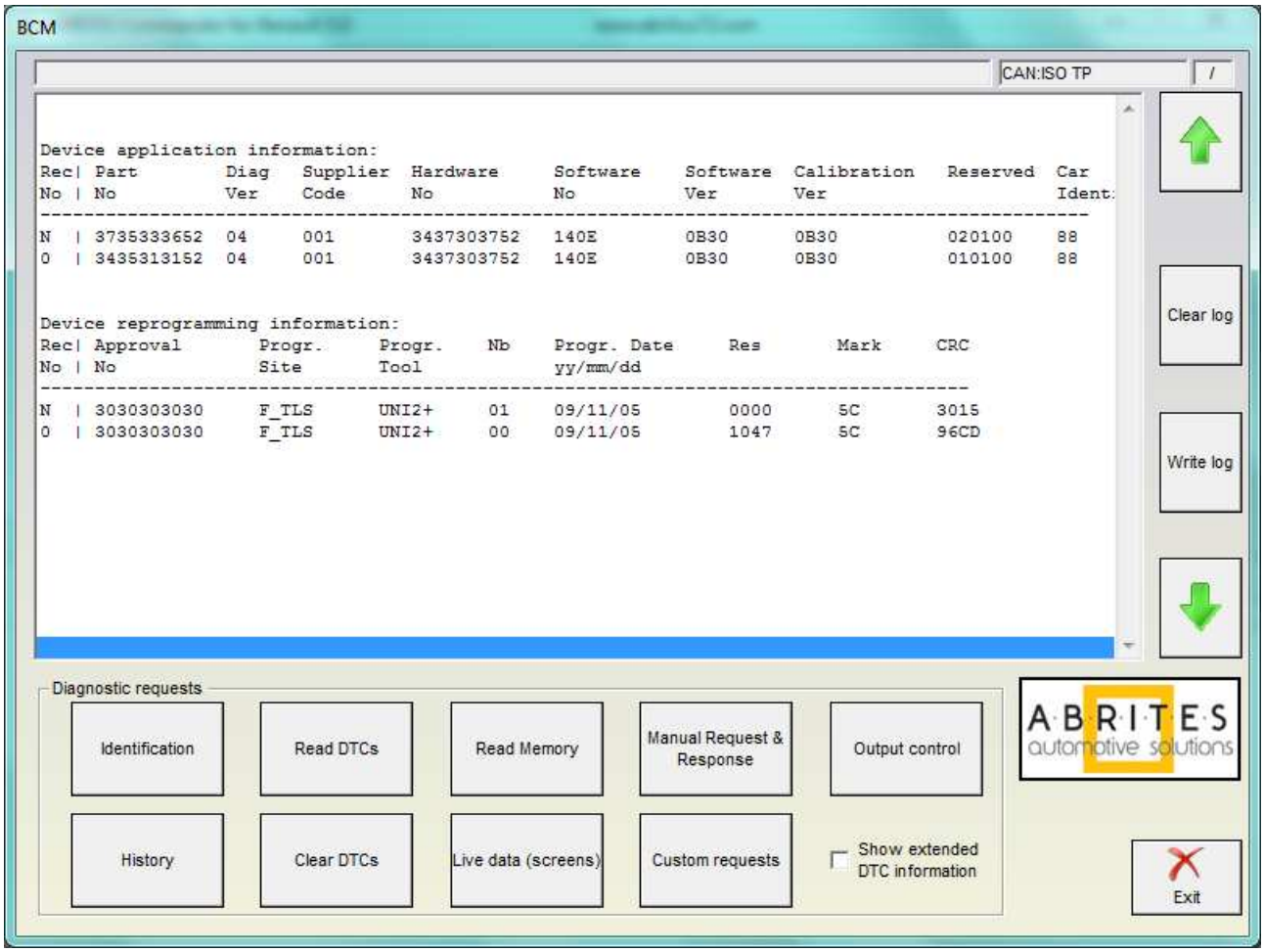
3.1.1 Identification

“Identification” will provide you the device identification and VIN number if present.


BCM
CAN:ISO TP
\
Establishing diagnostic session with selected unit ....
Diagnostic channel is open.
*** Device identification ***
Part No
Diag Ver
Supplier Code
Hardware No
Software No
Software Ver
Calibration Ver
Reserved
Car Identif.
8200606826 50 001 8200606826 1408 0940 0901 2D2814 00
8200606826 50 001 8200606826 1408 0940 0901 2D2814 00
VIN: VF1BM0JAA36799999
Clear log
Write log
Diagnostic requests
Identification
Read DTCs
Read Memory
Manual Request & Response
Output control
History
Clear DTCs
Live data (screens)
Custom requests
Show extended DTC information
ABRITES automotive solutions
Exit

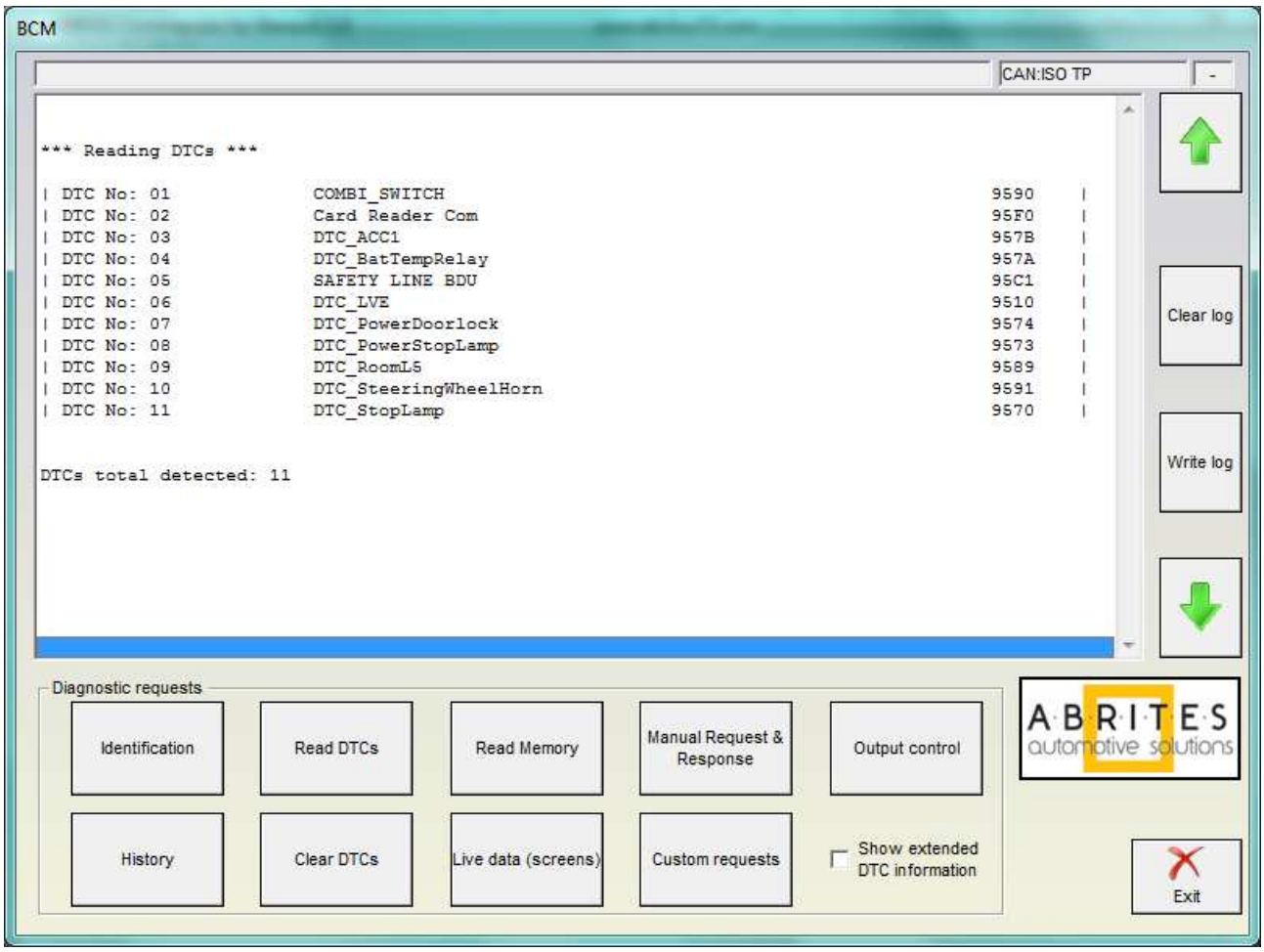
3.1.2 Read History information

Pressing the “History” button will read the re-flashing information for the selected device


BCM
CAN:ISO TP
Device application information:
Rec| Part Diag Supplier Hardware Software Software Calibration Reserved Car
No | No Ver Code No No Ver Ver Ident.
N | 3735333652 04 001 3437303752 140E 0B30 0B30 020100 88
0 | 3435313152 04 001 3437303752 140E 0B30 0B30 010100 88
Device reprogramming information:
Rec| Approval Progr. Progr. Nb Progr. Date Res Mark CRC
No | No Site Tool yy/mm/dd
N | 3030303030 F_TLS UNI2+ 01 09/11/05 0000 5C 3015
0 | 3030303030 F_TLS UNI2+ 00 09/11/05 1047 5C 96CD
Clear log
Write log
Diagnostic requests
Identification
Read DTCs
Read Memory
Manual Request & Response
Output control
History
Clear DTCs
Live data (screens)
Custom requests
Show extended DTC information
ABRITES automotive solutions
Exit

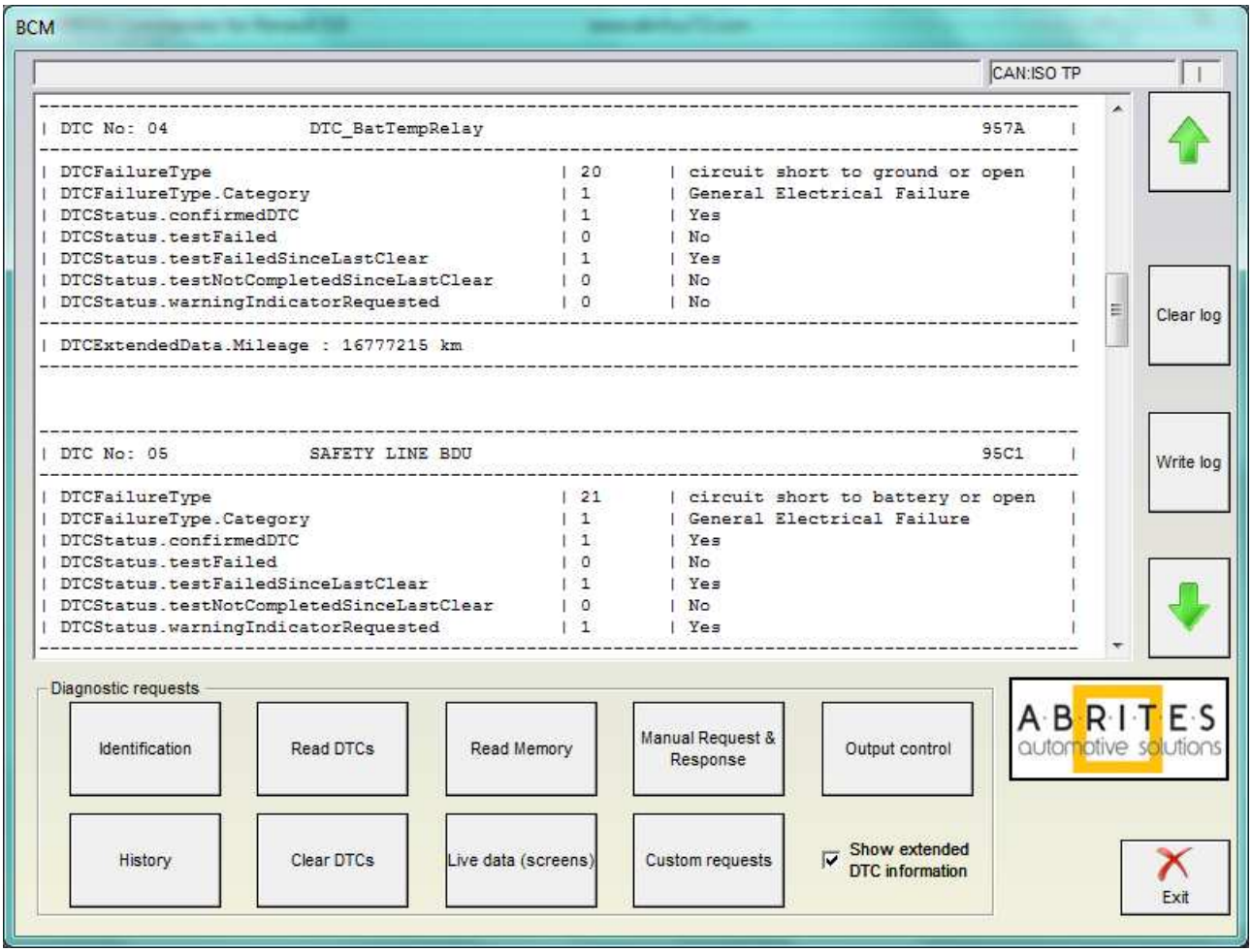
3.1.3 Read Diagnostic Trouble Codes

“Read DTCs” read the diagnostic trouble codes currently stored into the device


BCM
CAN:ISO TP
*** Reading DTCs ***
| DTC No: 01 COMBI_SWITCH 9590 |
| DTC No: 02 Card Reader Com 95F0 |
| DTC No: 03 DTC_ACC1 957B |
| DTC No: 04 DTC_BatTempRelay 957A |
| DTC No: 05 SAFETY LINE BDU 95C1 |
| DTC No: 06 DTC_LVE 9510 |
| DTC No: 07 DTC_PowerDoorlock 9574 |
| DTC No: 08 DTC_PowerStopLamp 9573 |
| DTC No: 09 DTC_RoomL5 9589 |
| DTC No: 10 DTC_SteeringWheelHorn 9591 |
| DTC No: 11 DTC_StopLamp 9570 |
DTCs total detected: 11
Clear log
Write log
Diagnostic requests
Identification
Read DTCs
Read Memory
Manual Request & Response
Output control
History
Clear DTCs
Live data (screens)
Custom requests
Show extended DTC information
ABRITES automotive solutions
Exit

The total number of DTCs being set is also reported.

NOTE: If “Show extended DTC information” is unchecked (default), then only the name of the stored DTC is reported. If it is checked, then detailed information is reported for each DTC:


BCM
CAN:ISO TP
| DTC No: 04 DTC_BatTempRelay 957A |
DTCFailureType	20	circuit short to ground or open
DTCFailureType.Category	1	General Electrical Failure
DTCStatus.confirmedDTC	1	Yes
DTCStatus.testFailed	0	No
DTCStatus.testFailedSinceLastClear	1	Yes
DTCStatus.testNotCompletedSinceLastClear	0	No
DTCStatus.warningIndicatorRequested	0	No
DTCExtendedData.Mileage : 16777215 km
DTC No: 05 SAFETY LINE BDU 95C1
DTCFailureType	21	circuit short to battery or open
DTCFailureType.Category	1	General Electrical Failure
DTCStatus.confirmedDTC	1	Yes
DTCStatus.testFailed	0	No
DTCStatus.testFailedSinceLastClear	1	Yes
DTCStatus.testNotCompletedSinceLastClear	0	No
DTCStatus.warningIndicatorRequested	1	Yes
Clear log
Write log
Diagnostic requests
Identification
Read DTCs
Read Memory
Manual Request & Response
Output control
History
Clear DTCs
Live data (screens)
Custom requests
Show extended DTC information
ABRITES automotive solutions
Exit

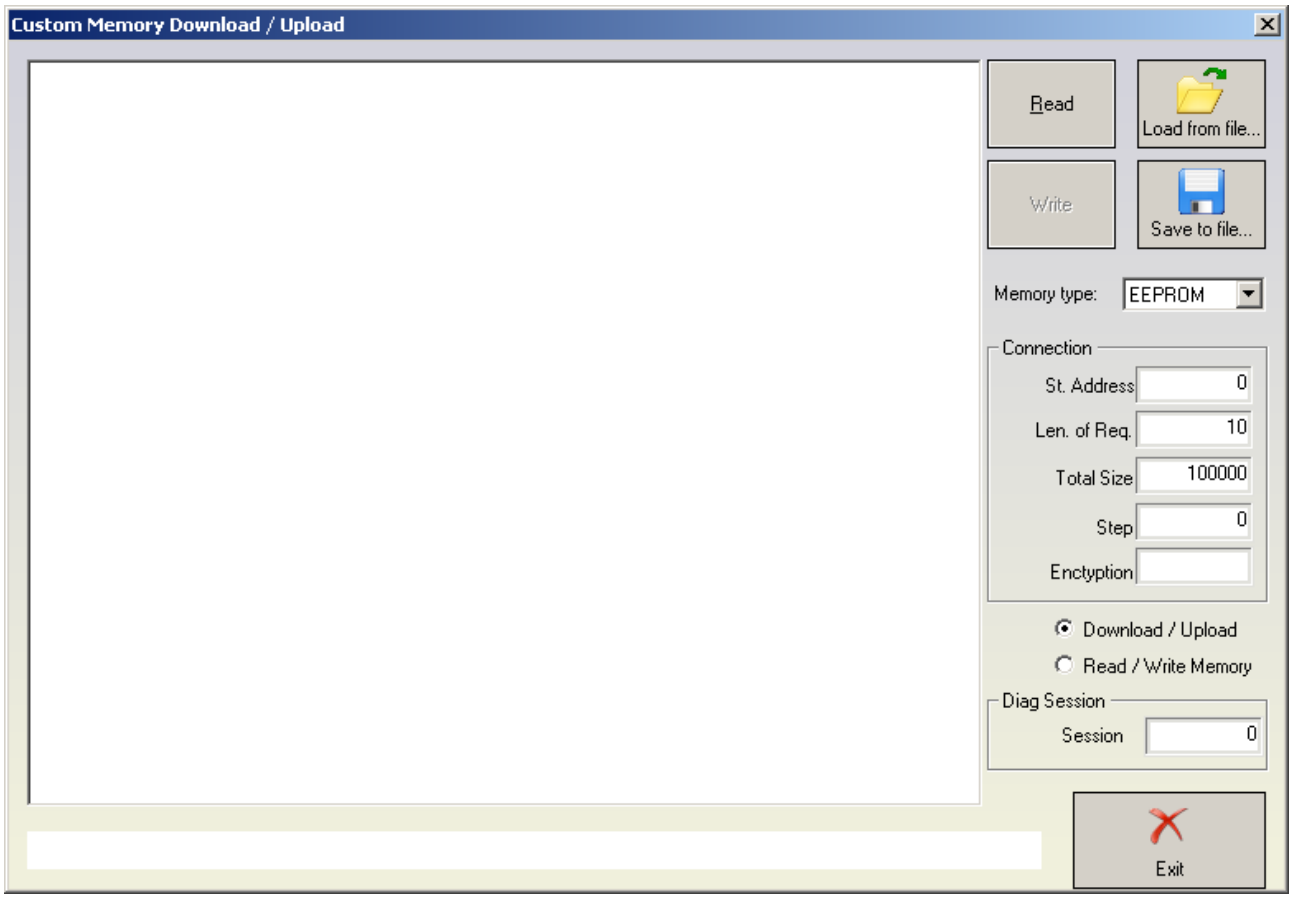
3.1.4 Clear Diagnostic Trouble Codes

“Clear DTCs” clears the diagnostic trouble codes.

3.1.5 Read Memory

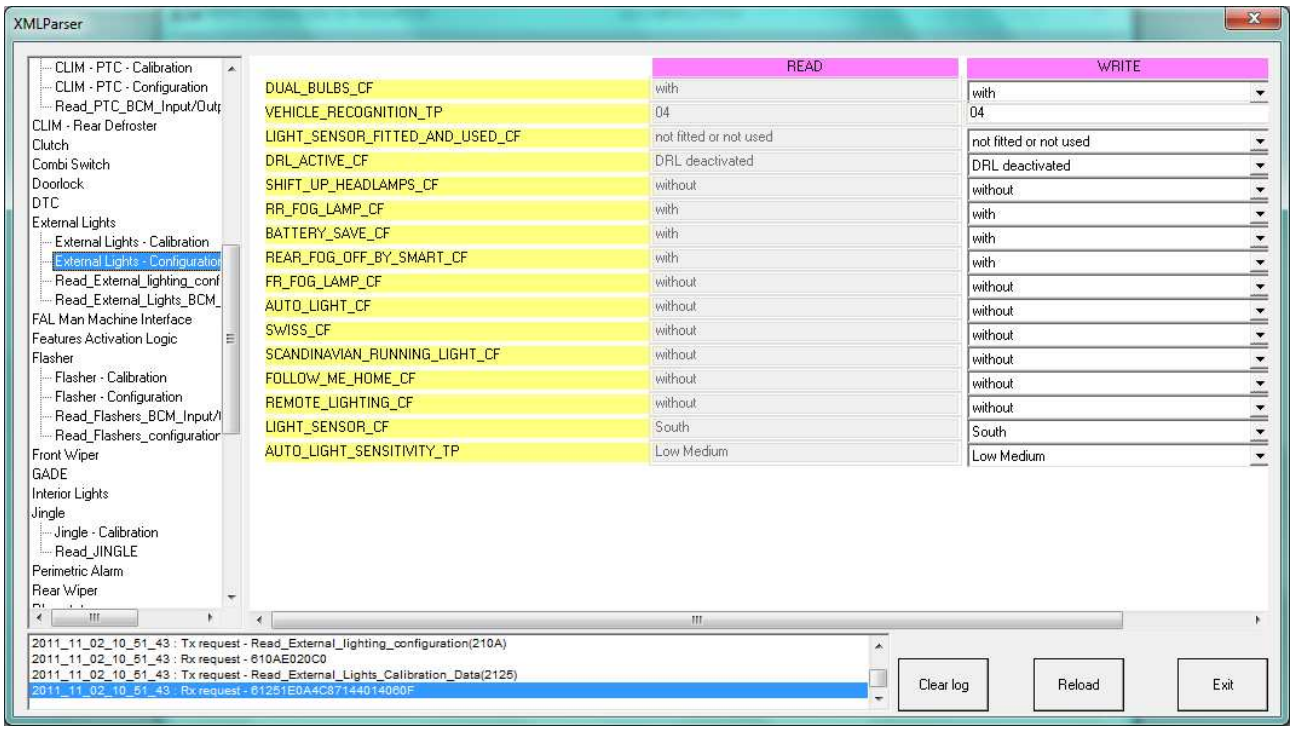
“Read Memory” allows to read/write the device memory. There are three memory types which can be read/write – EEPROM, RAM and Flash. The user has to put manually the address space where the desired memory is mapped.

NOTE: This function is applicable only for devices which don't have memory protection.



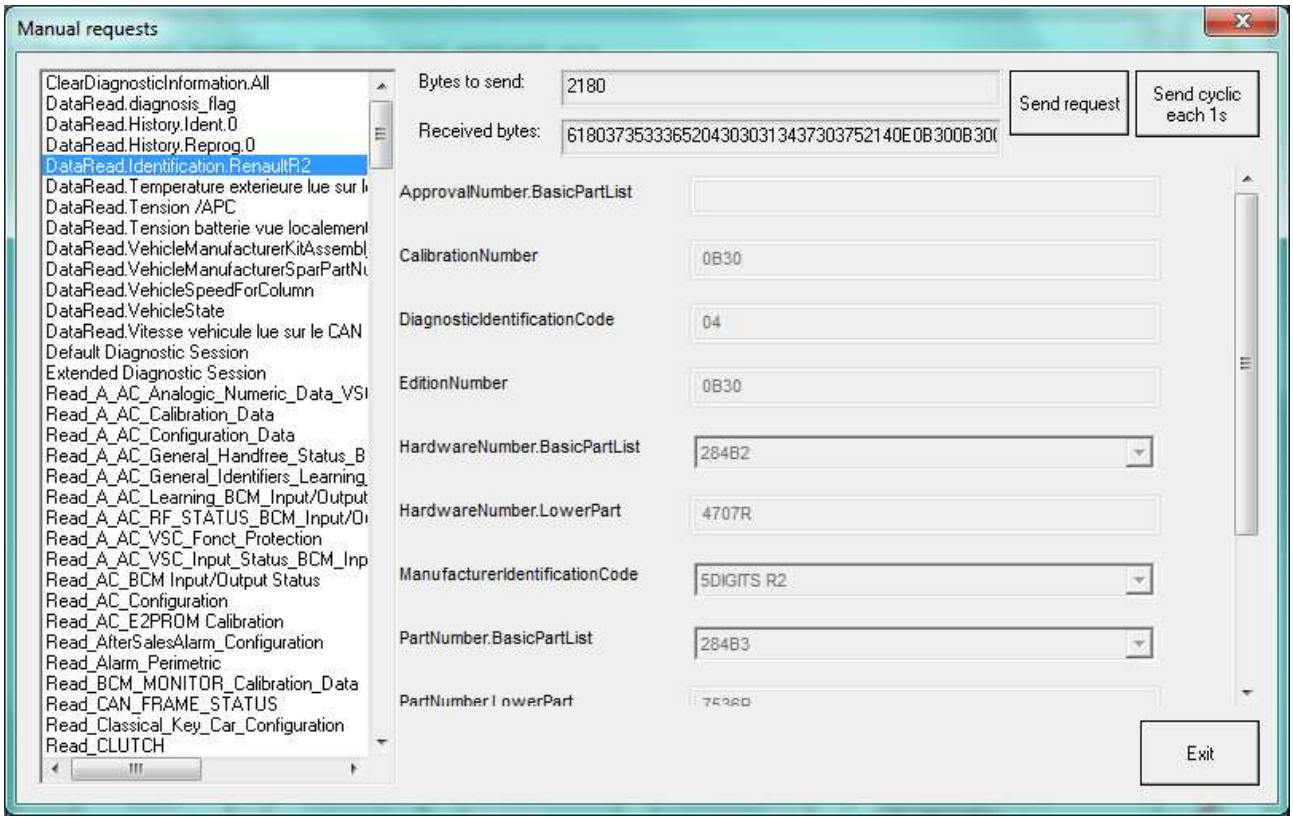
3.1.6 Live data (screens)

This function shows the so called live and configuration data (called also screens) for the concrete device. This screens are taken from the selected database when you establish the connection. Please pay attention that some configurations are read-only, but some of them are also writable. Also the screens are including some diagnostic procedures with respective description of the steps.



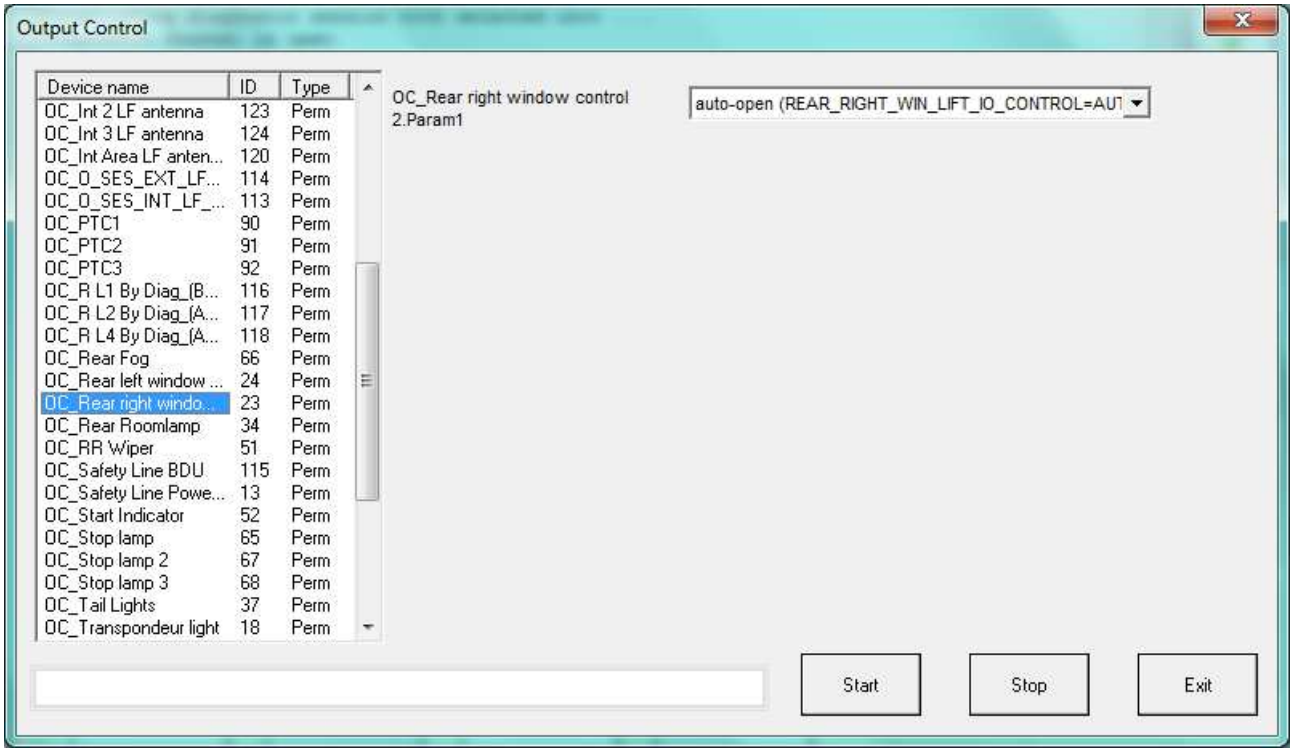
3.1.7 Manual requests & Response

This function is dedicated to the advanced users. It provides to the customer a list of all possible requests for the device, as defined in the selected database. User can see also the request and response data in binary view, and also the decoded request/response data.
It is possible also to specify to send some requests cyclically.



3.1.8 Output control

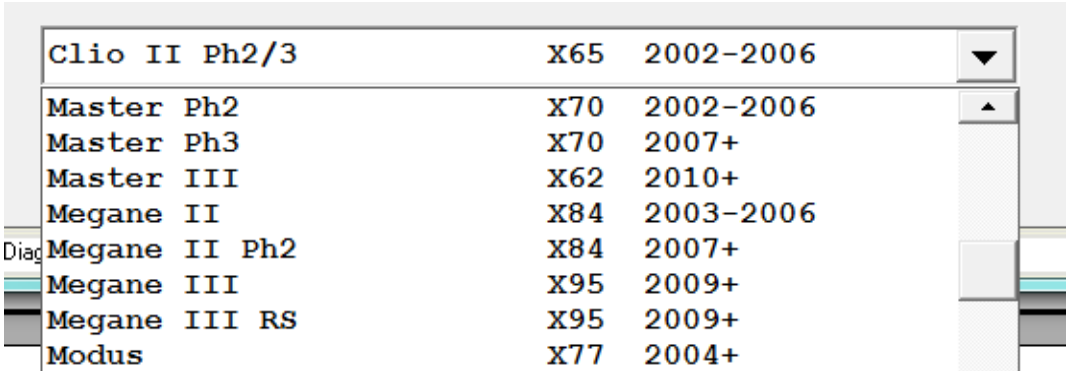
This function is dedicated to make actuator test, you can specify to start/stop some tests, e.g. gauge test, telltale test, lights test, etc. For some tests there are also additional parameters.



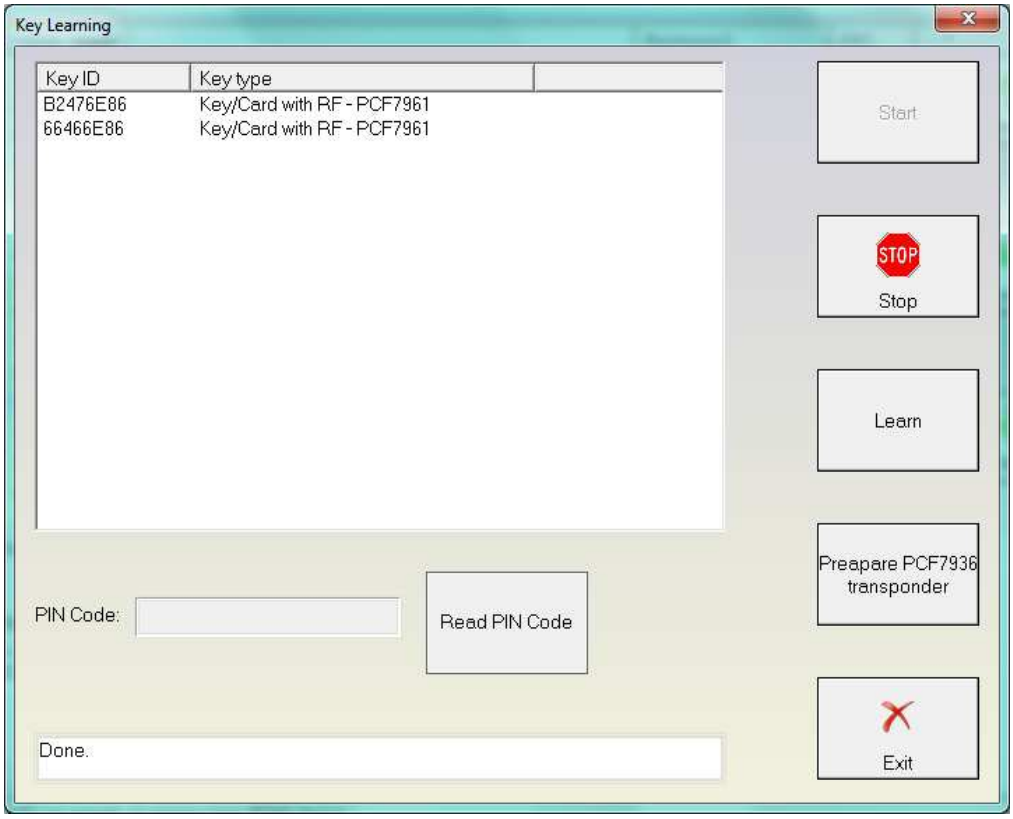
3.2 Key Learning

3.2.1 Common procedure

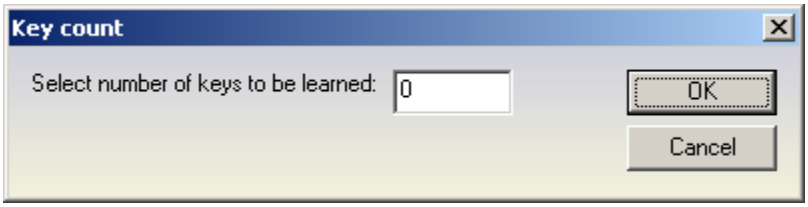
There is function for auto-detection of the vehichle model. Nevertheless if you don't succeed to learn the key using the auto-detection, please try to make it by selection the model manually.


Clio II Ph2/3 X65 2002-2006
Master Ph2 X70 2002-2006
Master Ph3 X70 2007+
Master III X62 2010+
Megane II X84 2003-2006
Megane II Ph2 X84 2007+
Megane III X95 2009+
Megane III RS X95 2009+
Modus X77 2004+

When this function is opened, the “ABRITES Diagnostics for Renault” opens the following dialog:



When you press the “Start” button then application connects to the immobilizer and reads the keys which are currently accepted from the car. If you want to learn a key/card, then you need to press the “Learn” button and you've to specify how many keys/cards you want to learn.



After that you should follow the instructions.

Normally the procedure goes in that way:

1. When pressing the start button the application is connecting to the immobilizer and displaying the present keys/cards. In most cases it is not required that the car is on ignition, for some cars the immobilizer is awake directly from the diagnostic. But on some cars it may happened that the ignition is given when connecting to the device.
2. After pressing the “Learn” button and specifying the number of keys you will be invited to remove the key/card from the ignition. Please be sure that the key/cards is really removed after this. Otherwise immobilizer will reject the key-learning procedure.

3. After that you will be invited to insert each next key/card and give the ignition ON. For each key there are several seconds required until the immobilizer recognize the key/card.
   NOTE: For some models there are two ways to learn keys/cards – regular procedure or using direct writing to the EEPROM memory. For Clio III Direct, Modus Direct and Traffic III Direct the keys are put into the programmer, not into the ignition. When

putting the key into the programmer please be sure that it is correct placed as showed on the pictures below:

4. Step “3” is repeated for each key you want to learn.
5. After inserting all keys which have to be learned you will be asked whether you want to store the result or to reject the whole procedure (use-full if you made some mistake during the key-learning procedure like forgot to put some key).

If you don't have an original key for the model, you can use PCF7936 transponder to make a key for the car. Please note that PCF7936 might be used only on cars with key, not on cars with cards! Also if you learn PCF7936 transponder there will be no remote control for that key! So if you want to use such PCF7936 transponder, you should connect your programmer, put a factory new transponder inside and press the “Prepare PCF7936 transponder”.

3.2.2 X95 based cars

For X95 based cars (Megane III/ScennicIII/Fluence, etc) there is a difference in step “2” from the common procedure. The rule is that if you will learn a new (virgin) key/card, put the card in the ignition lock (without giving IGNITION ON), if you will learn an already pre-coded or working keys/cards - there should be no key/card in the ignition lock. Here are some examples:

- if you will learn a virgin card, put this card in the ignition lock. For example if car has two working cards, and you want to add one, you should specify 3 cards for the key count, put the virgin card in the ignition, then when invited to put first key/card – do nothing. Then when invited to put second and third key/card, put the original working keys into the ignition. If you want to add two virgin cards, you need to execute the whole procedure twice!

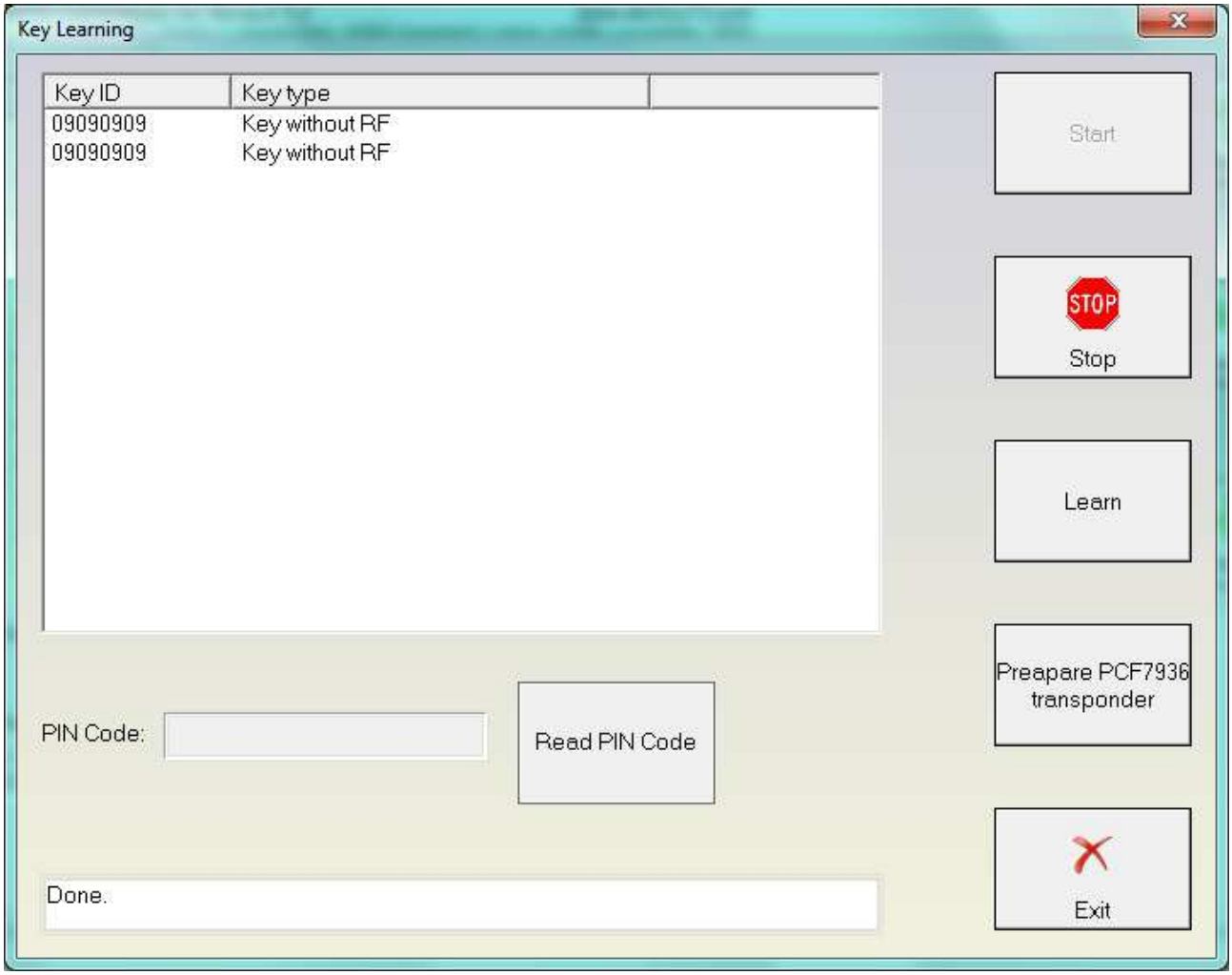
- if you will learn only cards which are working (e.g. car has three working cards, one of them is loosed and you want to relearn that only the other two cards continue to work), in that case no card should be on the ignition for this step.

NOTE: For Renault Fluence if you want to learn a virgin key, put it in the ignition lock (without giving ignition ON) and perform the procedure (this is the original procedure). If you've message "PIN code not accepted! Make sure ignition is OFF!" - then repeat the procedure from the beginning with the SAME VIRGIN KEY, and this time the key should be

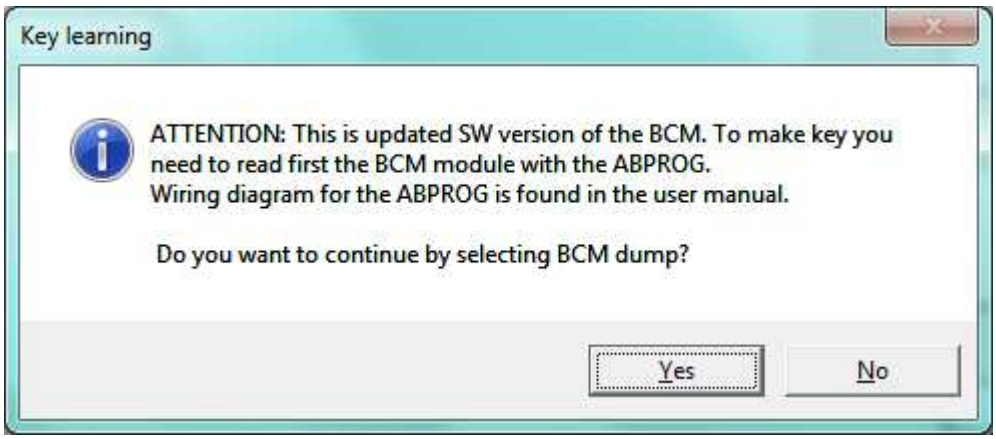
outside the ignition lock! (i.e. the exception here is that the virgin key is not in the ignition lock)

3.2.3 X95 based cars with update SW

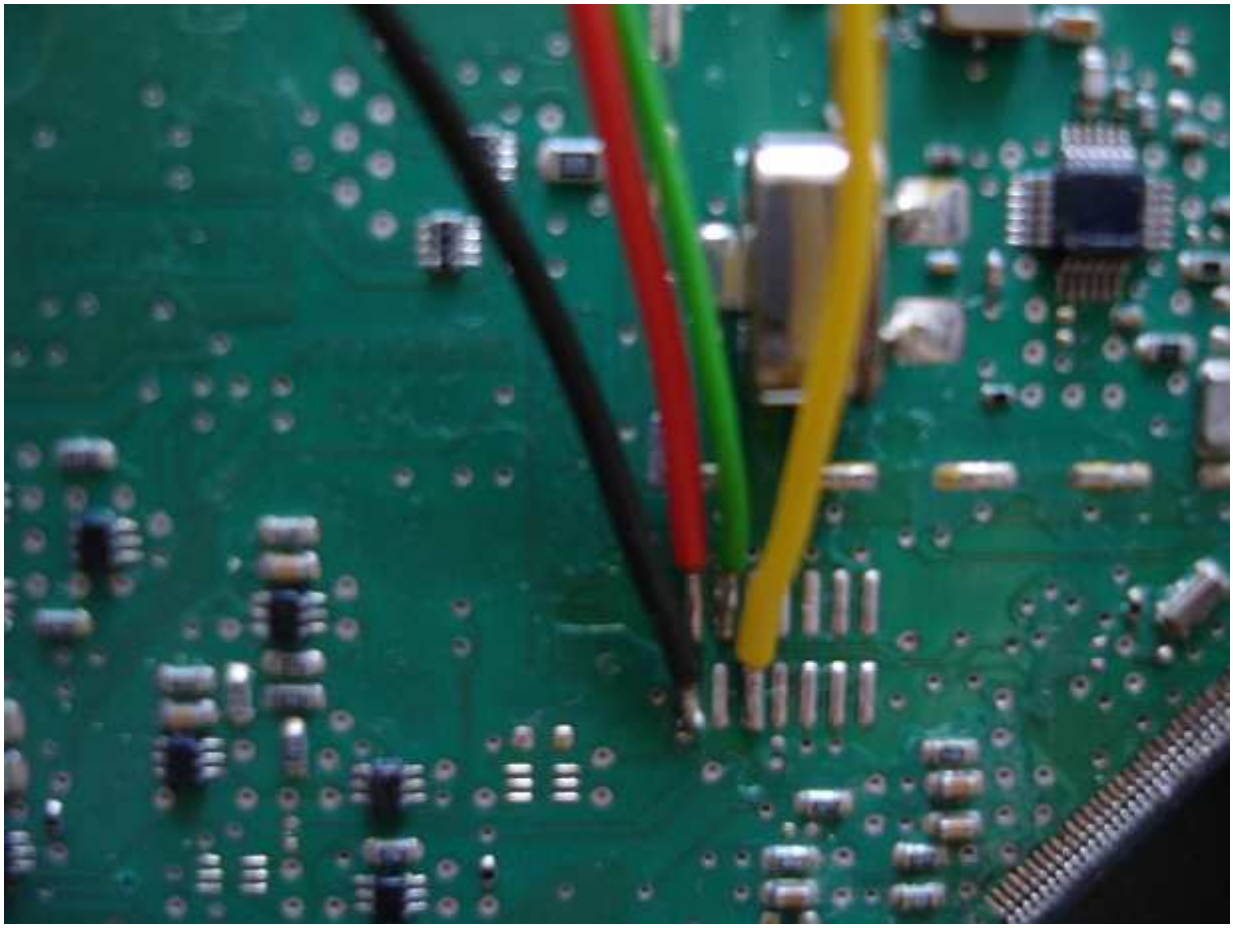
Starting from about 2011 these cars have updated software in the immobilizer and it is no more possible to make them by OBDII. Starting with V5.2 of the ABRITES Command for Renault, it is possible to make cards for them, but you should first read them with the ABPROG. You can easily recognize these immobilizers since they are showing “09090909” for the existing key-IDs.

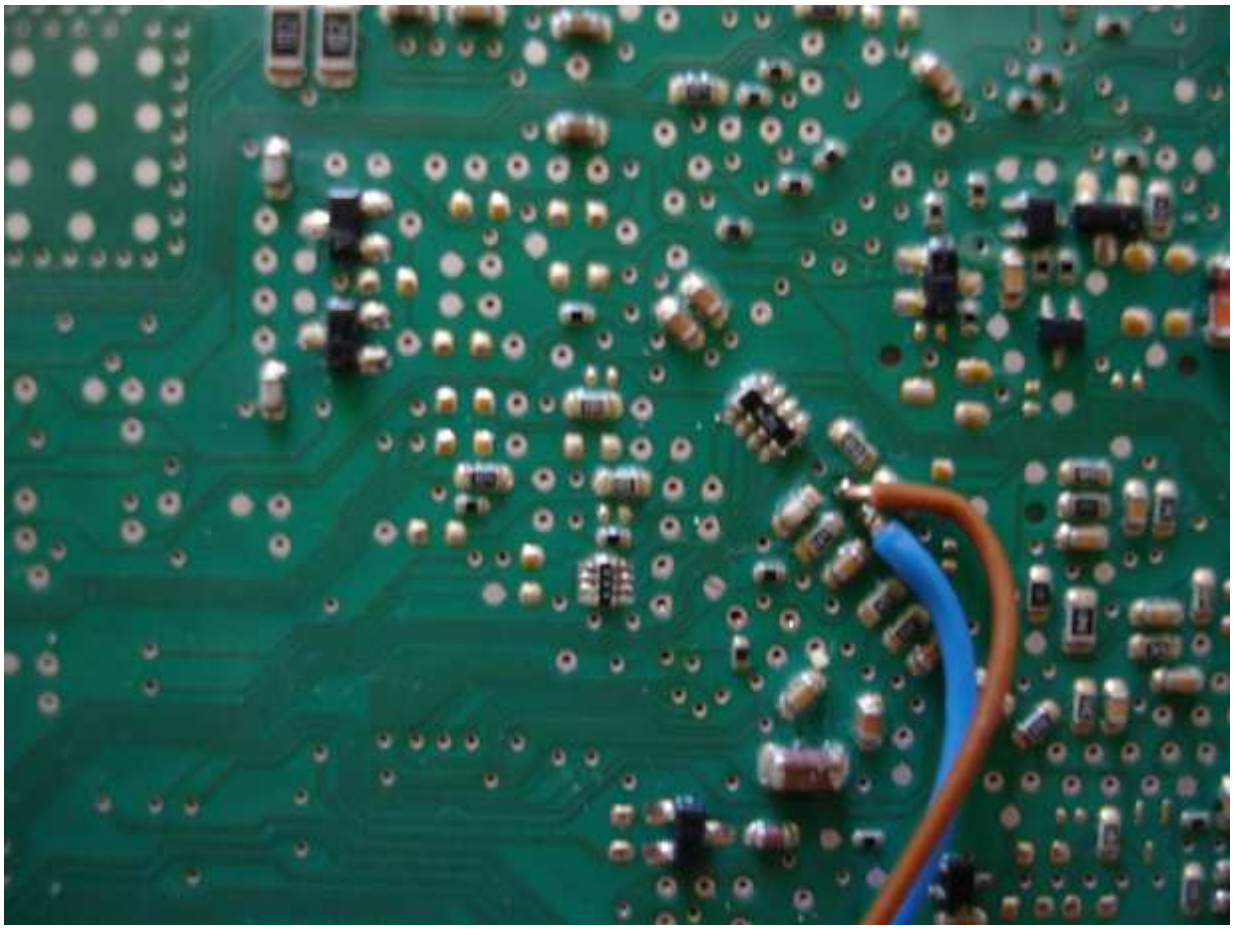


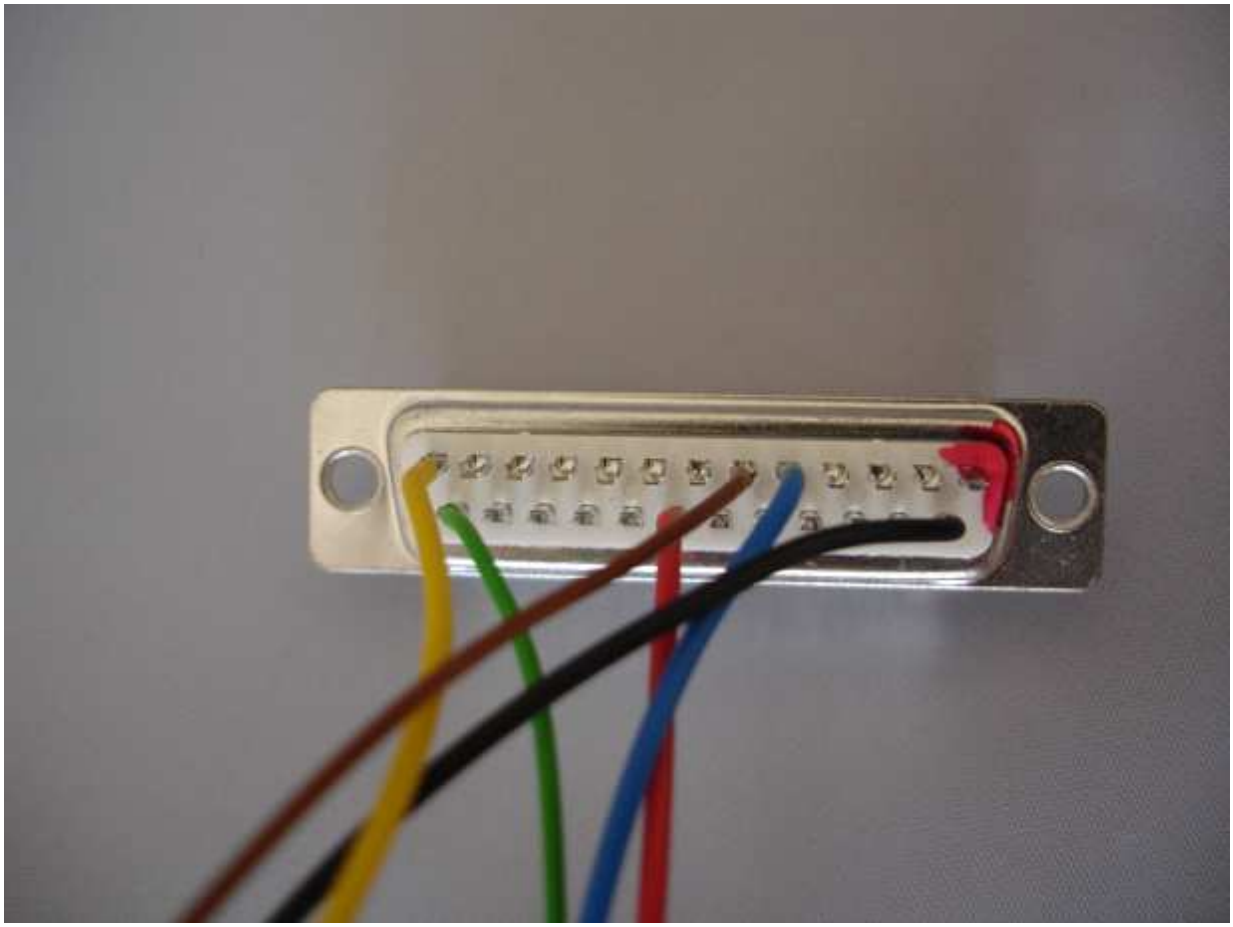
If you press “Learn” or “Read PIN Code” for such immobilizer, there will be a warning that first you need to read the immobilizer with the ABPROG. You should press here “Yes” after you already read the immobilizer dump.


Key learning
ATTENTION: This is updated SW version of the BCM. To make key you need to read first the BCM module with the ABPROG.
Wiring diagram for the ABPROG is found in the user manual.
Do you want to continue by selecting BCM dump?
Yes
No

To read the immobilizer with the ABPROG you need to solder as showed on the pictures below. In the ABPROG you should select “MCU” and the “Renault (X95) BCM” option.







3.2.4 Troubleshooting:

Two possible error messages may appear when trying to learn a new key/card:

- Error “$E001” - this error means that the immobilizer is not ready to perform the key-learning procedure. Typical reason for this message is when you try to make the procedure while the engine is started. Another reason for that message may be that the card is not removed from the ignition lock when you're invited to do this. Another reason for this message is when an invalid security code was entered previously into the immobilizer – after such operation the immobilizer is blocked for a log time and you've to wait until it is unblocked.
  On some cars (typically Scenic and Megane) this error may appear by some other reason. You can try to perform the key-learning procedure as described above but without giving on ignition during step “1” - try the following sequence: close the doors of the car and if possible lock the car, then open the door and go to the key-learning procedure. Press “Start” button but WITHOUT GIVING ON IGNITION before that. After that you can continue with step “2” of the procedure described above. If this also doesn't help you can try to leave the card in the ignition lock during step “2”.
- Error “$E002” - the key-learning procedure is accepted from the immobilizer, but the some of the cards which you tried to learn were invalid. This can typically happen when you try to learn a car from one model to another. This error may also appear if you've selected wrong model – e.g. you've “Laguna II” but you've selected “Laguna II Phase 2”

  NOTE: When you're trying to program a key to e.g. Laguna II Ph2, it is possible that you got an error. Please try the Laguna II type then – there is no risk to damage the immobilizer. The reason for this is that some cars in the greater phase are equipped with older immobilizer. This may apply also to Espace IV Ph2 and Velsatis Ph2.

3.3 Special functions

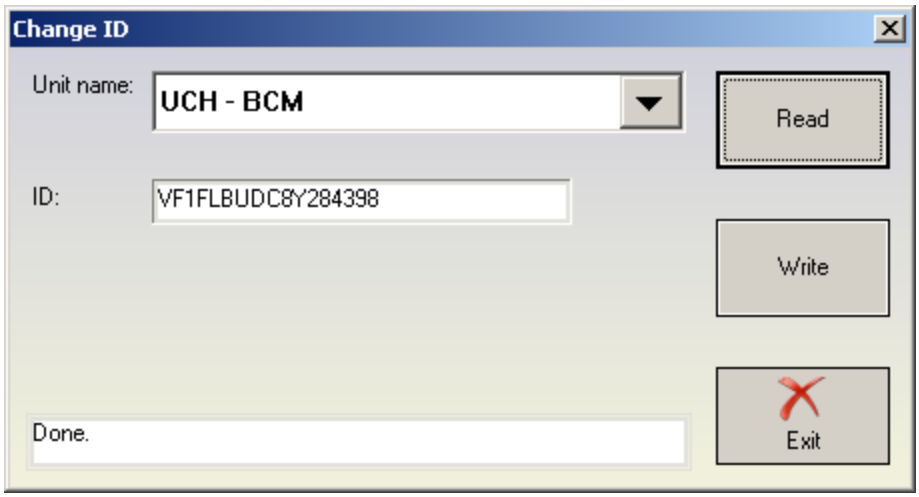
The following special functions are available:

3.3.1 "Dump Tool"

The dump tool give to the user the ability to make modification in the dump files of different devices (e.g. airbags). But you will need to read EEPROM/flash with a programmer, and after modifications in the dump tool the resulting file has to be write back to the EEPROM/flash with a programmer.

3.3.2 "Change ID"

Calling this function will bring you a dialog, where all devices for the selected model are available.



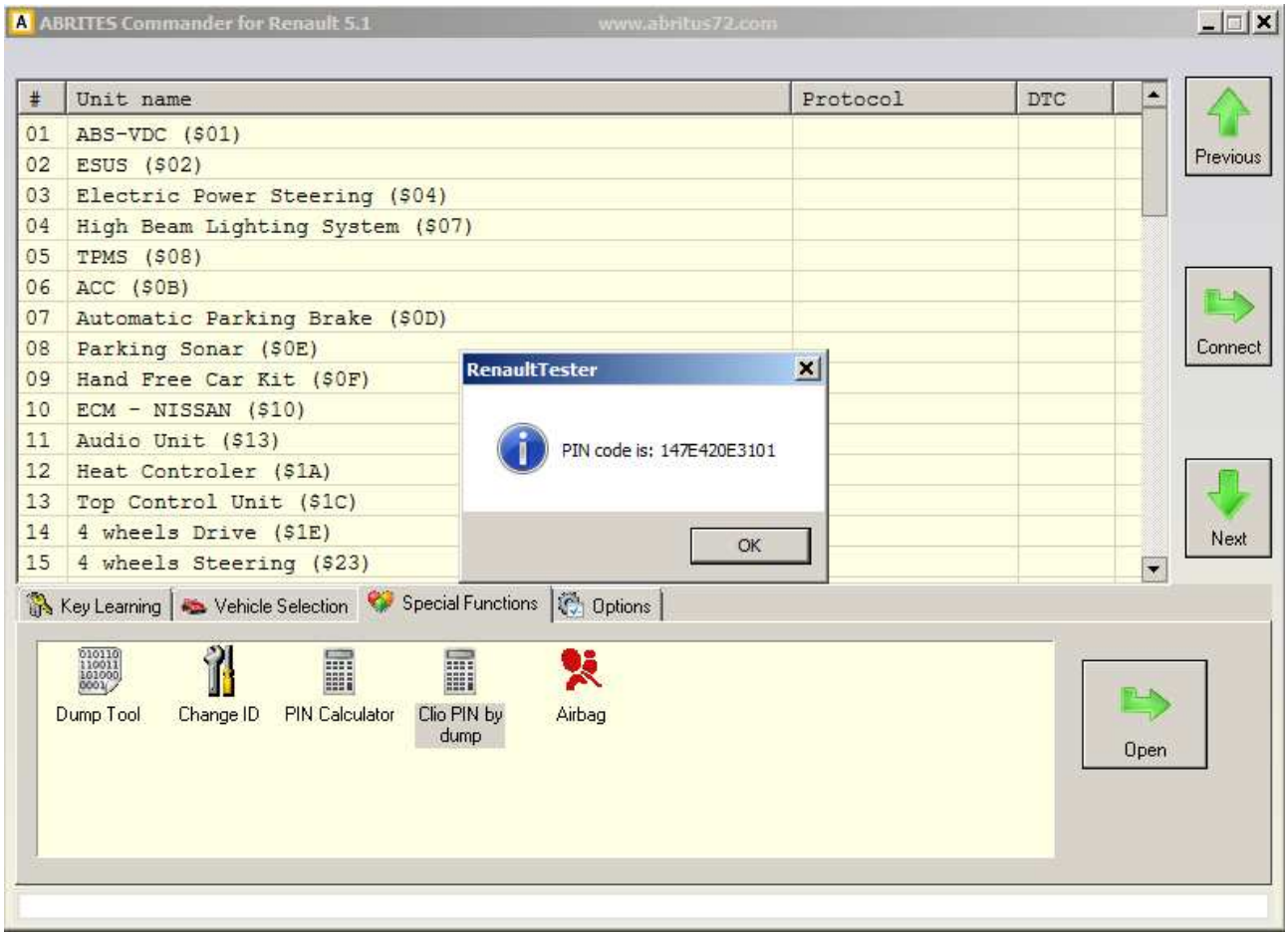
For each device you can try to read and change the Vehicle Identification Number.
When changing this number there is also a checksum which is calculated automatically.
Please note that in the most of the device there will be no such number present.

3.3.3 "PIN Calculator"

This is a calculator which can evaluate the immobilizer security code from the vehicle model and the code written on the key itself (when you open the key). This calculator is used for cars with 4 digit PIN till 2001 year.

3.3.4 “Clio PIN by dump”

This is a calculator for getting the Clio PIN code from the immobilizer dump. After starting this special function you will need to select the EEPROM dump file and after that you will get the security (PIN) code.


ABRITES Commander for Renault 5.1
www.abritus72.com
Unit name Protocol DTC
01 ABS-VDC ($01)
02 ESUS ($02)
03 Electric Power Steering ($04)
04 High Beam Lighting System ($07)
05 TPMS ($08)
06 ACC ($0B)
07 Automatic Parking Brake ($0D)
08 Parking Sonar ($0E)
09 Hand Free Car Kit ($0F)
10 ECM - NISSAN ($10)
11 Audio Unit ($13)
12 Heat Controler ($1A)
13 Top Control Unit ($1C)
14 4 wheels Drive ($1E)
15 4 wheels Steering ($23)
Previous
Connect
Next
RenaultTester
PIN code is: 147E420E3101
OK
Key Learning
Vehicle Selection
Special Functions
Options
Dump Tool
Change ID
PIN Calculator
Clio PIN by dump
Airbag
Open

4 TROUBLESHOOTING

Below you can find a list of typical problems and how to solve them:

Problem: When starting the “ABRITES Diagnostics for Renault” on the splash screen “**Interface NOT found**” is displayed
Solution:

- Please be sure that the USB interface drivers are installed properly. You can look at the device manager, the USB interface should appear as “USB Serial Port (COMxx)” where “xx” is the number of the port
- If the interface is recognized OK, then please try to unplug and plug it again into the USB slot and restart the “ABRITES Diagnostics for Renault”.
- If the problem is still present, please report about the problem to Abritus72 Ltd.

Problem: Error is occurred when trying to program a key to “Renault Laguna II Ph2” (or Espace IV Ph2, Velsatis Ph2)
Solution: Please use “Laguna II” (respectively Espace IV or Velsatis)